given in the REVIEW for August, 1890. The precipitation for the current month was the greatest on record at: Augusta, 10.39; Narragansett Pier, 6.95. It was the least on record at: San Antonio, 0.40; Moorhead, 0.88; Indianapolis, 0.42; Kittyhawk, 1.33; Cape Henry, 1.53.

The *total accumulated monthly departures* from January 1 to the end of the current month are given in the second column of the following table; the third column gives the current accumulated precipitation expressed as a percentage of its normal value.

Districts.	Accumulated departures.	Accumulated precipitation.	Districts.	Accumulated departures.	Accumulated precipitation.
	Inches.	*Per ct.*		*Inches.*	*Per ct.*
New England	+ 1.70	106	Middle Atlantic	— 2.10	93
Florida Peninsula	+ 4.50	114	South Atlantic	— 3.30	91
Ohio Valley and Tenn.	+ 1.20	104	East Gulf	— 1.80	95
North Dakota	+ 0.10	101	West Gulf	— 6.40	78
Upper Mississippi Valley	+ 1.70	107	Lower Lake	— 1.10	95
Middle Slope	+ 0.70	104	Upper Lake	— 0.30	99
Southern Slope	+ 1.70	111	Missouri Valley	— 1.30	94
Southern Plateau	+ 2.80	149	Northern Slope	— 1.00	91
Middle Plateau	+ 0.10	101	North Pacific	— 1.60	95
Northern Plateau	+ 0.40	104	Middle Pacific	— 2.30	88
South Pacific	+ 0.80	110			

HAIL.

The following are the dates on which hail fell in the respective States:

Alabama, 30, 31. Arizona, 2, 6, 18, 19. Arkansas, 30. California, 20. Colorado, 1, 2, 3, 6, 14 to 17, 30. Connecticut, 15. Florida, 13. Georgia, 30. Idaho, 4. Illinois, 9. Indiana, 1, 14, 15, 19, 24. Iowa, 2, 3, 7, 20, 23, 25. Kentucky, 1, 2, 4, 6, 10, 15, 22, 23. Louisiana, 30. Maryland, 11, 14, 15, 16, 23, 24, 25. Massachusetts, 22. Michigan, 9, 10, 14, 15, 24, 28, 29. Minnesota, 2, 28, 31. Missouri, 3, 4, 19, 21, 25. Montana, 1, 5, 13, 31. Nebraska, 7, 13, 16, 17, 20. Nevada, 17, 26. New Jersey, 4, 16, 22, 23. New Mexico, 4, 6, 9, 10, 11, 16, 18, 19, 21. New York, 10, 12, 15, 17, 19. North Carolina, 5, 16, 20, 25, 31. North Dakota, 3, 18, 27, 28. Ohio, 4, 10, 15, 16, 29. Pennsylvania, 4, 10, 15, 18. South Carolina, 1, 6, 14, 29, 30, 31. South Dakota, 1, 31. Tennessee, 3, 22, 25, 30. Vermont, 9, 15, 16, 19. Virginia, 5, 10, 16, 23, 30. Washington, 4. West Virginia, 23. Wisconsin, 9. Wyoming, 2, 14, 17, 19, 30.

WIND.

The *prevailing winds* for August, 1897, viz, those that were recorded most frequently, are shown in Table I for the regular Weather Bureau stations.

Maximum wind velocities are given in Table I, which also gives the altitudes of the Weather Bureau anemometers above the ground. Maxima of 50 miles or more per hour were reported during this month at regular stations of the Weather Bureau as follows (maximum velocities are averages for five minutes; extreme velocities are gusts of shorter duration, and are not given in this table):

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
		Miles				*Miles*	
Chicago, Ill	1	56	ne.	Knoxville, Tenn	30	50	sw.
Duluth, Minn	8	50	nw.	Sault Ste. Marie, Mich.	29	50	nw.
Fort Canby, Wash	31	52	s.	Tatoosh, Wash	3	50	e.

The *resultant winds*, as deduced from the personal observations made at 8 a. m. and 8 p. m., are given in Table VIII. These latter resultants are also shown graphically on Chart IV, where the small figure attached to each arrow shows the number of hours that this resultant prevailed, on the assumption that each of the morning and evening observations represents one hour's duration of a uniform wind of average velocity. These figures indicate the relative extent to which winds from different directions counterbalanced each other.

ATMOSPHERIC ELECTRICITY.

Numerical statistics relative to auroras and thunderstorms are given in Table IX, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—The dates on which the number of reports of thunderstorms for the whole country were most numerous were: 10th, 227, and 15th, 277.

Reports were most numerous from Colorado, 236; Florida, 238; Ohio, 274.

Thunderstorm days were most numerous in: Florida, 31; New Mexico, 29; Mississippi, 28; Colorado and Louisiana, 27.

In Canada.—Thunderstorms were reported as follows: St. Johns, 5, 6, 8, 9, 10, 14; Halifax, 6, 15, 25; Grand Manan, 16; Yarmouth, 11, 16; Charlottetown, 6, 9, 16; Chatham, 16, 20; Father Point, 15, 16; Quebec, 8, 10, 15, 16, 20, 27; Montreal, 3, 10, 16, 25; Rockliffe, 9; Toronto, 10, 15, 18, 24, 30; White River, 15, 29; Port Stanley, 4, 10, 25, 29, 30; Saugeen, 10; Parry Sound, 10, 14, 18, 24; Port Arthur, 9, 13, 28; Winnipeg, 8, 12; Minnedosa, 12; Qu'Appelle, 3, 11, 21, 25; Medicine Hat, 7; Swift Current, 1, 5; Calgary, 9, 12; Banff, 7, 10, 11, 16, 21, 25; Prince Albert, 7, 12, 13, 15, 21; Edmonton, 5, 11, 12, 24; Battleford, 7, 10, 11, 12.

Auroras.—The evenings on which bright moonlight must have interfered with observations of faint auroras are assumed to be the four preceding and following the date of full moon, viz, from the 8th to the 16th, inclusive. On the remaining twenty-two days of this month 74 reports were received, or an average of about 3 per day. The dates on which the number of reports of auroras for the whole country especially exceeded this average were: 19th, 13; 20th, 7; 29th, 7.

Reports were most numerous from Minnesota, 9; North Dakota, 19; Ohio, 10; Wisconsin, 8.

The number of reports was a large percentage of the number of observers in: North Dakota, 40.

In Canada.—Auroras were reported as follows: Grand Manan, 20; Yarmouth, 31; Quebec, 20, 22, 28, 30; Montreal, 20, 23; White River, 29, 30; Winnipeg, 2, 15, 23, 26, 29, 30; Minnedosa, 1, 3, 26, 29, 30.

SUNSHINE AND CLOUDINESS.

The quantity of sunshine, and therefore of heat, received by the atmosphere as a whole is very nearly constant from year to year, but the proportion received by the surface of the earth depends upon the absorption by the atmosphere, and varies largely with the distribution of cloudiness. The sunshine is now recorded automatically at 22 regular stations of the Weather Bureau by its photographic, and at 40 by its thermal effects; at one of these stations records are kept by both methods. The photographic record sheets show the apparent solar time, but the thermometric records show seventy-fifth meridian time; for convenience the results are all given in Table X for each hour of local mean time. In order to complete the record of the duration of cloudiness these registers are supplemented by special personal observations of the state of the sky near the sun in the hours after sunrise and before sunset, and the cloudiness for these hours has been added as a correction to the instrumental records, whence there results a complete record of the duration of sunshine from sunrise to sunset.